

Chapter 1 Our Traffic Nightmare

A recent Texas Institute of Transportation Study¹ determined that traffic congestion in the Bay Area is the second worst in the nation – rapidly closing in on Los Angeles for the dubious distinction of the most time spent in traffic of any region in the country. The study estimates that throughout the Bay Area over \$3 billion is lost each year in time and fuel consumed in traffic jams. This information comes as no surprise to residents and workers in Marin County who have seen congestion increase year after year. And as congestion has worsened, so have negative impacts on our environment and our overall quality of life.

But where does all that congestion come from? And, more importantly, what can we do about it? *Moving Forward* evaluates our travel patterns and provides a blueprint of realistic and implementable solutions to transform our traffic nightmare into a dream of enhanced mobility, improved quality of life, and a healthier environment.

Traffic congestion in the Bay Area is the second worst in the nation – and growing.

A LOCAL PROBLEM WITH A REGIONAL COMPONENT

The Marin County Congestion Management Agency, working closely with the County Board of Supervisors, has recently completed a three-year study looking at traffic patterns within and through Marin County. The results of the study show dramatic changes in travel habits over the past decade and some surprising challenges for the future. The study contests commonly held beliefs that our congestion is largely the impact of growth, or the impact of commuters passing through Marin County on their way to jobs in San Francisco. The data shows that our congestion is largely a local problem with a regional component.

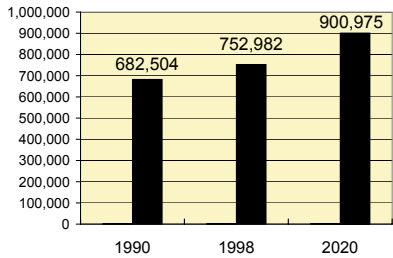
¹ Texas Transportation Institute, 2001 Urban Mobility Study, 2001

TRIP GENERATION IN MARIN COUNTY

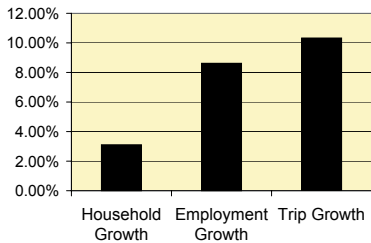
Marin County residents are "on the move." People who live in the County made over 750,000 trips in 1998, up by more than 10% in less than a decade. Almost 70% of those trips were made entirely within Marin County.

The growth in trip making is outpacing growth in either employment or residents in Marin County. While the number of trips made in Marin County grew by about 10% between 1990 and 1998, the number of Marin County households grew by only 3% and the number of jobs in Marin County grew by about 8.5%. In fact, during this period, Marin County experienced slower household growth than any other county in the Bay Area outside of San Francisco, while experiencing rapidly increasing congestion.

This increase in trip generation, with only slight growth in the number of households and moderate growth in the number of jobs in the County, can only be attributed to one thing – we are each making more trips. The increase in congestion experienced in the County is a direct result of our increased tripmaking.



**Trips made by Marin
County Residents,
1990-2020 (projected)**



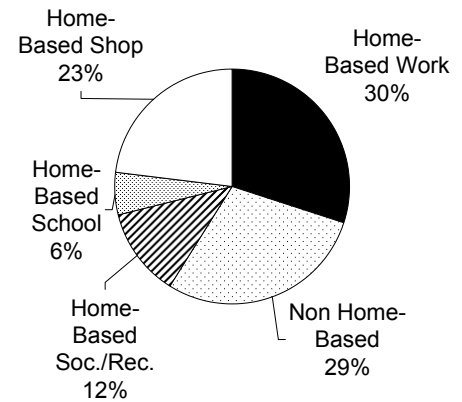
**Growth in Marin County,
1990-1998**

Why We Travel

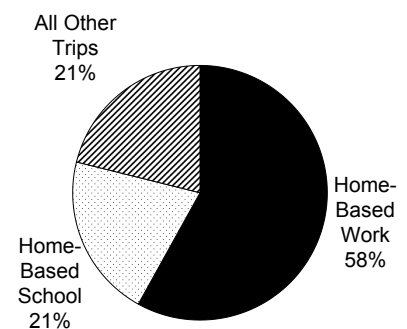
Residents of Marin County travel for many purposes, including work, school, shopping and social trips. Traffic engineers classify most of those trips as "home-based trips" meaning that they either begin or end at home. However, a growing number of trips are classified as "non home-based," meaning that they are made during the day as part of a chain of trips. This may involve running a series of errands or traveling between work and other non-home destinations.

Looking at all of the trips generated throughout the day by residents of Marin, about 30% are trips between home and work, and about 30% are for trips that are not home-based. About another quarter of all trips are between home and shopping destinations and nearly 13% are for trips between home and social or recreational destinations. Only 6% of all trips are trips between home and school.

While trips are made throughout the day, congestion in Marin County is at its worst from six to nine in the morning and from four to six in the evening. Congestion county-wide is at its highest in the morning, when almost two-thirds of all trips are from home to work, and 21% of all trips are between home and school. The impact of school trips in the morning peak is dramatic – while school trips make up only 6% of all trips made in the County, they make up over 20% of the trips in the morning peak. In part, this explains why traffic is less congested in Marin County during school breaks – when the schools are closed, school trips (as well as some work trips) are eliminated.



**Trip Purposes for Trips
Generated in Marin
County – Daily Trips**



**Trip Purposes for Trips
Generated in Marin
County – AM Peak Trips
All Roads Combined**

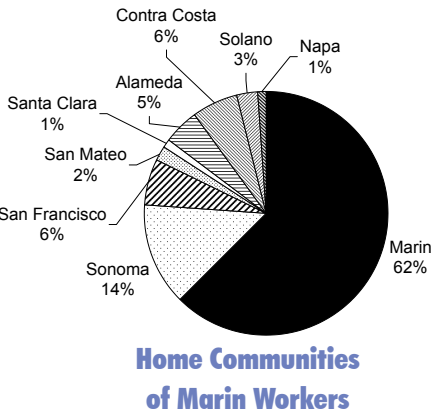
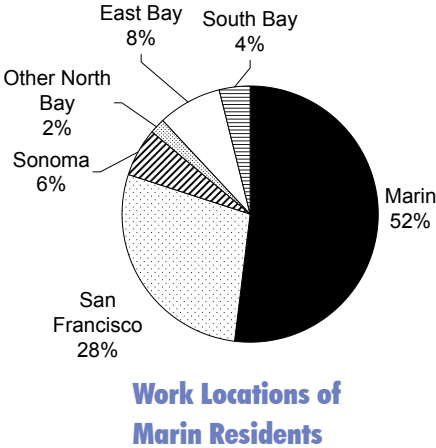
Where is Everyone Going?

Marin County is not only a very desirable place to live and recreate, but is also an important part of the Bay Area's economic engine. Over the past decade, commute patterns in the County have changed dramatically in response to new job creation in the County and an increase in the number of workers per household.

It is not too surprising that over 80% of all trips that begin in Marin County end within the County. The vast majority of shopping and recreational trips, as well as almost all school trips are made entirely within Marin. But what about work trips? A common assumption is that people who live in Marin County work elsewhere, especially in San Francisco. But today, over half of all work trips made by Marin County residents are to jobs here in the County.² And, while more than a quarter of Marin County's work trips are still destined for San Francisco, the Marin-San Francisco commute is well served by transit. While only about 11% of all commute trips originating in Marin County are made on transit, over 25% of Marin-San Francisco commute trips are made via transit, minimizing the impact of that commute on our roads.

An increasing number of jobs in Marin County helps to reduce the number of Marin residents who commute outside the County for work. But those jobs also attract workers who live elsewhere. Nearly 40% of Marin County workers live outside the County. The majority, approximately 14%, are Sonoma County residents who travel south to jobs in Marin. The limited supply of affordable housing in Marin County is a significant

² Within the San Francisco Bay Area, Marin County still has one of the lowest percentages of commuters who live and work in their home county. Highest in the Bay Area is San Francisco, with nearly 70% of commuters living and working in the county, and lowest is Solano County, with only about 40% of its commuters working in their home county.



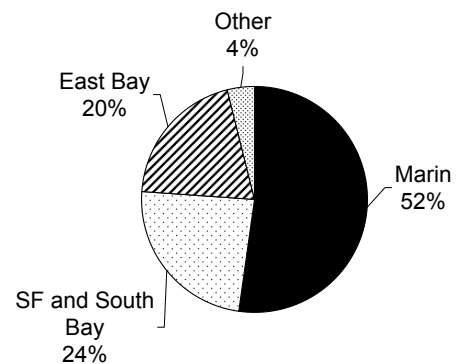
factor in these commute patterns. Many of the workers who travel to Marin from neighboring counties do so because they cannot afford to live in Marin, or because housing is substantially cheaper elsewhere.

A growing trend that will influence future transportation needs is the northbound commute. While only 6% of work trips are currently headed to Sonoma County, rapid job growth there as well as in Solano County is attracting an increasing share of Marin County residents, and may also reduce the number of Sonoma and Solano County workers who must travel outside their home counties for work.

Looking at all trips made in the morning peak, over 70% of all trips that begin in Marin County have destinations within the County. The high number of local school trips being made in the morning combine with local work trips to create the majority of the congestion we all experience.

THE REGIONAL COMPONENT

Not all trips made to and through the County originate here. Marin County is in an important position in the regional transportation system, as well as being a destination in its own right. Historically, Marin County residents have looked to Sonoma County as the source of their congestion, assuming that Sonoma residents traveling to jobs in San Francisco would drive through Marin, creating gridlock in their wake. In fact, over half of the morning peak period traffic entering Marin County from the north on Highway 101 is destined for Marin County. Less than one-fourth of all trips entering Marin on this route are actually destined for San Francisco or points south. A growing travel pattern has been trips generated in Sonoma County and other points north that travel through Marin County to the East Bay. This market is almost as big as



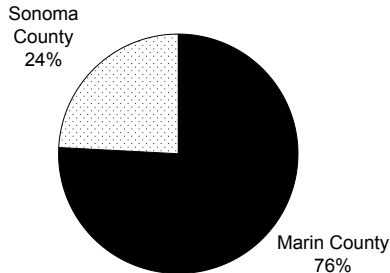
**Destinations of
Trips Entering Marin
County from Sonoma
County on Highway
101 – AM Peak**

the Sonoma-San Francisco market. These trips travel through Marin County as far as I-580, adding to local congestion in that area.

Another common belief is that trips beginning in the East Bay cut through Marin County to access the Golden Gate Bridge into San Francisco. Extensive data collection shows that this is not the case. In fact, there was no measurable "cut through" traffic on this route in the AM peak, even with Bay Bridge volumes at record highs. Travel over the Richmond-San Rafael Bridge remains popular, but over three quarters of all trips entering Marin County in the morning are destined for locations within the County. Even during the afternoon commute, when San Francisco's Bay Bridge approaches experience near gridlock conditions for several hours, only 2% of the eastbound trips on I-580 originate in San Francisco. The vast majority (78%) of eastbound evening I-580 trips begin in Marin County, as workers employed here head home to the East Bay.

While this may seem unbelievable, it is completely consistent with counts taken on the Golden Gate Bridge. All day traffic volumes across the Bridge have not appreciably changed in over a decade. The increase in trips generated in Marin County are not being made over the Golden Gate Bridge, they are being retained right here!

This is not to suggest that congestion patterns at the Bridge have remained the same. In fact, the number of vehicles on the Bridge during peak periods has increased. This has caused the morning and evening peak periods, during which congestion is most severe, to spread out over more hours of the day. And, weekend travel has increased, so that Sunday afternoon traffic exceeds some weekdays, creating extreme pressure in Southern Marin, on Highway 1, and on other highway approaches.



**Destinations of Trips
Entering Marin County
from the East on Highway
580 – AM Peak**

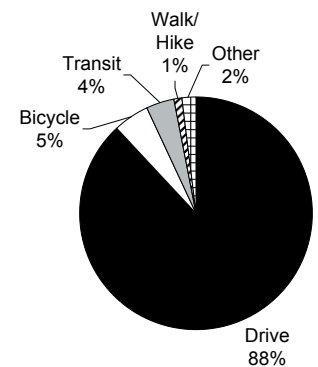
**Volumes on the Golden
Gate Bridge have not
appreciably changed in
over a decade.**

THE RECREATIONAL COMPONENT

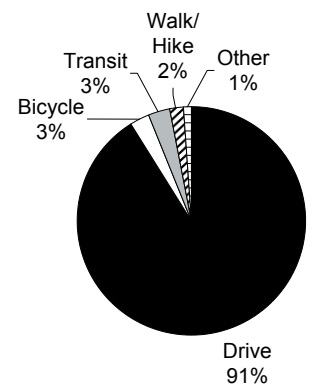
Marin County is unique because it is home to a large number of natural attractions that are of regional and national significance. These important recreational destinations include the Golden Gate National Recreation Area, Mt. Tamalpais State Park, Muir Woods National Monument, Point Reyes National Seashore, Samuel P. Taylor State Park, and Tomales Bay State Park. These are certainly treasures for Marin and are often a main reason that residents cite for living in Marin.

The drawback of hosting such important recreational uses is the traffic generated by visitors to these sites. This traffic is exacerbated by the limited number of access points on narrow roadways, and the fact that many visitors must travel through residential areas of Marin to access the various parks. Congestion on weekends in many areas of the County rivals and even exceeds weekday levels. Additionally, recreational travel demand is more difficult to serve with alternatives compared to commuter travel.

Similar to travel generally, Marin residents are also a significant part of traffic generated by the recreation areas. Recent data collected for the Marin Headlands and Fort Baker (GGNRA) showed that 16% of visitors were Marin County residents. A quarter originate in San Francisco. Overall, two-thirds of visitors are from the Bay Area. Data collected for Muir Woods, Muir Beach, Stinson Beach, Mt. Tamalpais, and the Tennessee Valley during all four seasons reveals a far more local recreational pattern, with 63% of visitors to these areas living in Marin County. Muir Woods was the only one of these destinations where most visitors began their trip outside the County.



Mode of travel for visitors to Marin Headlands/Fort Baker in summer



Mode of travel for combined visitors to Muir Woods, Muir Beach, Stinson Beach, Mt. Tamalpais and Tennessee Valley

CHANGING DEMOGRAPHICS AFFECT MOBILITY NEEDS

The transportation vision presented here seeks to address current congestion problems, while also looking to the future mobility needs of the County. Several key changes will influence the way we travel in the future:

- Marin County is a "graying county," with the average age of County residents on the rise. The Association of Bay Area Governments (ABAG) estimates that by 2020, over 35% of our population will be over age 65. The fastest growing age groups in the County are 65-85 and 85+. The needs of older residents for a lifetime of mobility must be addressed in a way that also addresses our peak commute needs.
- The need to drive children to school and park at local schools while dropping students off creates the noticeable increase in congestion on school days. School congestion affects both regional and local routes, with a "ripple effect" throughout our neighborhoods. Yet, traditional solutions to school congestion, such as "yellow school bus" transportation are not readily available to us today. There are few school buses available to our students and those that are available are often quite costly.
- Sonoma County and Solano County are developing local job bases that will have a number of impacts on our congestion problem. While fewer Sonoma and Solano residents may need to come to and through Marin County to work, their jobs will attract Marin residents north, creating a "reverse commute" that may ultimately be problematic.

Our transportation vision must consider these changing demographics and economic trends, providing solutions that offer a "lifetime of mobility" for residents of all ages. Consequently, *Moving Forward* emphasizes multi-modal solutions that provide new alternatives for travel which work together to create a comprehensive transportation system.

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TOWARDS A MULTIMODAL FUTURE

The statistics presented in this chapter lead to some surprising conclusions. Rather than blaming our congestion problems on excessive growth or "outsiders" traveling through Marin County, we must recognize that the sources of our congestion are primarily local. The County's low growth rate is expected to continue over the next 20 years, producing the lowest population and employment growth of any county in the Bay Area, with the exception of San Francisco. Despite the slow growth in population, congestion is projected to grow at three times the rate of population growth over the next 20 years.

And while there is a definite regional component to Marin County's congestion problems, most of the traffic coming to Marin County is destined for locations within the County, rather than cutting through the County on the way to somewhere else. The simple fact is that Marin County residents are very mobile — each person is taking more trips for a wide range of trip purposes. As each person's travel demand increases, more and more local trips are being made, creating more congestion on arterial and other routes, as well as adding more trips on the highway. We see this in "peak spreading," where congested periods on the highway and on major arterial routes extend for more hours every day and are present on weekends as well as on weekdays. We see this also in our school related traffic, where congestion on non-school days is appreciably lighter than on school days, when school trips comprise 21% of our morning commute traffic.

As long as Marin County remains an attractive part of a vital Bay Area, there will be congestion — unless we do something about the way each of us travels.

Congestion is projected to grow at three times the rate of population growth over the coming 20 years.